

IN THE CLAIMS:

Please amend claims 1, 5, 7, 10, 16, and 17 pursuant to 37 C.F.R. § 1.121 as follows (see the accompanying "marked up" version pursuant to § 1.121):

1. (Twice Amended) A slide drive device for a press machine, comprising:

 a slide;

said slide including a top and a bottom dead center position;

a single adjusting means for permitting adjustment of a stroke of said slide; and

said adjusting means simultaneously adjusting said top and bottom dead center positions by a same amount.

5. (Twice Amended) A slide drive device, according to claim 4, further comprising:

 a crankshaft;

first and second connecting rods on said crankshaft;

said connecting rod receiving a reciprocating motion and transmitting said reciprocating motion to said means for driving;

said connecting rod and said means for driving being effective to transmit said reciprocating motion to said dynamically balancing means; and

said guiding means being effective to convert said reciprocating motion to a guiding displacement, whereby said slide operates in said cycle.

7. (Twice Amended) A slide drive device for a press machine having a slide, comprising:

a slide;

said slide having a top and a bottom dead center position;

a single adjusting means for adjusting a stroke of said slide;

said adjusting means simultaneously adjusting said top and bottom dead center positions by a same amount;

a driving means for permitting driving of said slide drive device;

at least a first upper link;

said first upper link being connected to drive said slide in a cycle;

said driving means transmitting a driving displacement to said slide to drive said slide in said cycle; and

said driving means transmitting said adjustment to said slide whereby said stroke is adjusted.

10. (Twice Amended) A slide drive device, according to claim 9, further comprising:

a crankshaft;

first and second connecting rods on said crankshaft;

a center of said crankshaft vertically aligned with said second slider;

at least one of a first and second eccentric part on said crankshaft;
said first and second eccentric parts diametrically opposed on said crankshaft;
said first and second eccentric parts balanced about a rotation center of said crankshaft;


said at least one connecting rod on said one eccentric part;
said connecting rod receiving a reciprocating motion and transmitting said reciprocating motion to said driving means;

said driving means being effective to transmit said reciprocating motion to said dynamically balancing means; and

a guiding means being effective to convert said reciprocating motion to a guiding displacement, whereby said slide operates in said cycle.

16. (Twice Amended) A slide drive device, for a press machine having a slide, comprising:

a single means for adjusting said slide drive device;
a crankshaft;
a first eccentric part on said crankshaft;
a second eccentric part on said crankshaft;
said first and second eccentric parts operably opposing each other about a rotation center of said crankshaft;
a first and second connecting rod;



said connecting rods operably joined to said eccentric parts;
said connecting rods receiving a driving displacement from said crankshaft;
a first and second upper link;
said upper links operable about a fixed fulcrum pin;
a first and second middle link;
said middle links having first and second ends;
said connecting rods effective to transfer said driving displacement to said middle links at said second ends;
said upper links operably joined to said middle link at a center fulcrum point between said first and second ends;
said middle links effective to transfer said driving displacement to said upper links;
said middle links and said upper links operably effective to transfer said driving displacement to a slide and drive said slide in a cycle;
said connecting rods having a length (a);
said center fulcrum point located a length (c) from said second end;
said center fulcrum point located a length (b) from said first end; and
said lengths (a), (b), (c), having the following relationship:
$$(a):(b) = (b):(c) \quad (VII)$$

whereby said connecting rods operate horizontally to said crankshaft and said upper links and said middle links are effective to transfer said driving displacement to

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said slide and drive said slide in said cycle at a low speed adjacent said bottom dead center for increased force and a fast speed distal said bottom dead center for a speedier return.

17. (Amended) A slide drive device, according to claim 16, further comprising:
a top and a bottom dead center position of said slide;
said adjusting means permitting adjustment of a stroke of said slide;
said adjusting means permitting adjustment of said top and bottom dead center position at the same time;
B⁸ said adjusting means permitting said adjustment of said top and bottom dead center positions by the same amount;

at least one of a first and second horizontal link;
a first and second end on said one horizontal link;
said one horizontal link effective to receive said driving displacement at said second end;
said one horizontal link effective to receive said adjustment at said first end; and
said one horizontal link effective to transfer said driving displacement and said adjustment to said slide whereby said slide is adjusted and driven in said cycle.
